

CLAIMS

1. Silicone composition which can be crosslinked to give an adhesive gel by hydrosilylation, characterized in that it is composed essentially of:

5 (A) - at least one polyorganosiloxane POS (I)

comprising:

a) end siloxyl units of type $M = (R)_2(H)SiO_{1/2}$

in which the R radicals, which are identical or different, correspond to an optionally

10 substituted linear or branched C_1-C_6 alkyl group and/or a substituted or unsubstituted aryl group, and

b) identical or different siloxyl units of type

$D = (R^1)_p(H)_qSiO_{2/2}$

15 in which the R^1 radicals correspond to the same definition as R and $p = 1$ or 2 , $q = 0$ or 1 and $p + q = 2$;

with the condition according to which the polyorganosiloxane POS (I) comprises at least two

20 SiH radicals per molecule;

(B) - at least one polyorganosiloxane POS (II)

comprising:

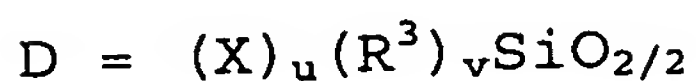
a) end siloxyl units of type $M = (X)_s(R^2)_tSiO_{1/2}$

in which the R^2 radicals correspond to the same

25 definition as R, the X radicals correspond to alkenyl groups having from 2 to 6 carbon atoms, preferably vinyl groups, $s = 0$ or 1 , $t = 2$ or 3

and $s + t = 3$; and

b) identical or different siloxyl units of type



in which the R^3 radicals correspond to the same

5 definition as R, the X radicals correspond to alkenyl groups having from 2 to 6 carbon atoms, preferably vinyl groups, $u = 0$ or 1, $v = 1$ or 2 and $u + v = 2$,

with the condition according to which the

10 polyorganosiloxane POS (II) comprises at least two X radicals per molecule;

(C) - at least one monofunctional polyorganosiloxane

POS (III) which is essentially linear, having

less than 2 mol% of siloxyl unit $T = RSiO_{3/2}$,

15 preferably less than 1.5 mol% and more preferably

still less than 1 mol% of unit $T = RSiO_{3/2}$, and

which comprises, per molecule, one alkenyl group

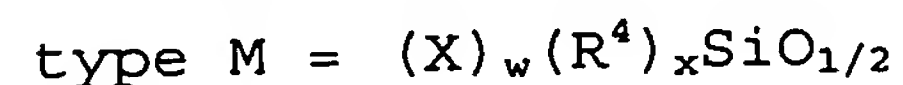
(X) having from 2 to 6 carbon atoms directly

bonded to a silicon atom, preferably one vinyl

20 group directly bonded to a silicon atom, the said

POS (III) comprising:

a) identical or different end siloxyl units of



in which the R^4 radicals correspond to the same

25 definition as R, $w = 0$ or 1, $x = 2$ or 3 and

$w + x = 3$; and

b) at least one siloxyl unit $D = (X)_y(R^5)_zSiO_{2/2}$

in which the R^5 radicals correspond to the same definition as R, $y = 0$ or 1 , $z = 1$ or 2 and $y + z = 2$,

(D) - an effective amount of at least one

5 hydrosilylation reaction catalyst; and

(E) - optionally at least one nonfunctionalized polyorganosiloxane POS (IV) comprising:

a) end siloxyl units of type $M = (R^6)_3SiO_{1/2}$

in which the R^6 radicals correspond to the same

10 definition as R, and

b) identical or different siloxyl units of type

$D = (R^7)_2SiO_{2/2}$

in which the R^7 radicals correspond to the same definition as R;

15 with the condition according to which the amount of the constituents (A), (B), (C) and (E) is chosen so that the molar ratio r of the hydrogen atoms bonded to silicon to the alkenyl radicals (X) bonded to silicon is between 0.2:1 and 5:1.

20 2. Silicone composition which can be crosslinked to give an adhesive gel by hydrosilylation according to claim 1, in which the molar ratio r is between 0.5:1 and 1.5:1.

3. Silicone composition which can be
25 crosslinked to give an adhesive gel by hydrosilylation according to either of the preceding claims, in which the molar ratio r is 1:1.

4. Silicone composition which can be crosslinked to give an adhesive gel by hydrosilylation according to one of the preceding claims, in which the R^1 , R^2 , R^3 , R^4 , R^5 , R^6 , R^7 and R^8 radicals are methyl groups.

5 5. Silicone composition which can be crosslinked to give an adhesive gel by hydrosilylation according to one of the preceding claims, in which the hydrosilylation reaction catalyst is based on platinum.

6. Silicone composition which can be crosslinked to give an adhesive gel by hydrosilylation according to one of the preceding claims, in which:

- the POS (I) is substantially linear and has a dynamic viscosity of less than or equal to 10 000 mPa·s, preferably of less than or equal to 6000 mPa·s and more preferably still of between 5 and 5000 mPa·s;
- the POS (II) is substantially linear and has a dynamic viscosity of less than or equal to 200 000 mPa·s, preferably of less than or equal to 170 000 mPa·s and more preferably still of between 20 and 165 000 mPa·s;
- the POS (III) has a dynamic viscosity of less than or equal to 150 000 mPa·s and preferably of between 20 and 100 000 mPa·s; and/or
- 25 - the POS (IV) is substantially linear and has a dynamic viscosity of less than or equal to 50 000 mPa·s, preferably of between 20 and

40 000 mPa·s.

7. System with at least two components (A1) and (B1) comprising the constituents (A), (B), (C) and (D) and optionally the constituent (E) of the silicone composition which can be crosslinked to give an adhesive gel by hydrosilylation according to one of claims 1 to 6, with the condition that the hydrosilylation reaction catalyst (D) is separate from the constituent (B).

8. Crosslinked adhesive gel obtained by crosslinking the silicone composition which can be crosslinked to give an adhesive gel by hydrosilylation according to one of claims 1 to 6 or by crosslinking the system with at least two components (A1) and (B1) according to claim 7.

9. Use of the crosslinked adhesive gel according to claim 8, of the system with at least two components (A1) and (B1) according to claim 7 or of the silicone composition which can be crosslinked to give an adhesive gel by hydrosilylation according to one of claims 1 to 6 in the field:

- of adhesives,
- of coatings,
- of leaktightness mastics,
- of the encapsulation and protection of electronic units,
- of materials for the manufacture of implants and

prostheses,

- of impact-cushioning and protecting means,
- of assembling cements, and
- of dressings.